

As manufacturer of safety equipment, the Cobianchi Lifteile AG company is responsible for the design and manufacture of the Cobianchi progressive safety gears (downward, PC200E) and brake devices (upward, PC200U).

In order to make the production, the distribution, and the maintenance of our progressive safety gears and brake devices easier for the manufacturers of the framework and for the installation companies, these operating instructions have been established.

These operating instructions document the PC200E and PC200U standard versions. If your installation type differs from the versions described in these instructions, please contact your technical office or the responsible construction department.

In the following you will find important notes, which if properly observed will contribute to an impeccable installation and operation.

The following drawing has to be enclosed with these operating instructions:

Drawing no.	Brake type	Front view, top view, side view
200E-BA01-1	PC200E, PC200U	Assembly drawing FV with Pos. no.

These operating instructions consist of some pages of text (number depending on the language) and one drawing. Customer-specific solutions may require deviating installation sequences. The progressive safety gears and brake devices can be installed on top of or underneath the cabin. The lifter rope engagement takes place at the draw-in lifter (Pos. 10). For detailed information, please refer to our technical documentation.

Subject to deviations from the standard versions described here.

To be observed prior to the installation:

The progressive safety gear or the brake device consist of two adjusted and sealed safety gear heads (Pos. 1). All performance specifications on the type plates refer to the use in pairs. The serial numbers are stamped into all safety gear heads (Pos. 1). These numbers must correspond to the serial number on the type plates attached and enclosed and must be able to be allocated to the serial number of the installation. If this is not the case, then a mistake has been made and it is necessary to refer back to the purchasing department, your own stores department or directly with the manufacturer.

1. Assembly

1.1. Assembly and alignment of safety gear heads

As a standard, the safety gear heads (Pos. 1) are supplied in fully assembled condition and adjusted with four gusset plates (Pos. 3). Support plates (Pos. 4), lifter shaft (Pos. 2), stop-triggering bushing (Pos. 2a) and limit switch (Pos. 6) are mounted to the safety gear rope side.

The gusset plates (Pos. 4) have to be screwed to the frame using a sufficient number of M20 screws. In the area of the hanging brackets the screws have to be screwed directly in the housings of the basic unit (Pos. 1). Secure absorption of the torque acting on the frame structure via the gusset plates (Pos. 3) during the brake process must be ensured.

For impeccable function of the brake unit it must be ensured that the distance of the brake shoes (Pos. 11) from the left- and the right-hand side of the guide rail running surface is equal. If necessary, ensure exact position by moving the guide shoes and secure against displacement.

For additional stabilization, the support plate (Pos. 4) can be secured at the safety gear frame using M12 screws.

1.2. Mounting of connection shaft between safety gear heads

The connection shaft is not supplied by Cobianchi Lifteile AG.

Connect the structural steel tube cut to suitable length (centre distance 230mm) 20x20x2.5 or 3mm according to DIN2395-3 to the square section release shaft coupler (Pos. 5) and tighten bolts and lock nuts.

After assembly of connection shaft has been completed, check that the linkage can be rotated easily by hand. Make sure that no excessive torsion occurs within the connection shaft. The draw-in lifters (Pos. 10) of the two safety gear heads must engage on both guide rails simultaneously. In the case of great centre distances the connection shaft has to be reinforced.

1.3. Assembly of support plates and lifter

If not already preassembled, the support plates (Pos. 4) have to be screwed to the gusset plate (Pos. 3) on the safety gear rope side. Position stop-triggering bushing (Pos. 2a) and insert lifter shaft (Pos. 2). The

roller of the limit switch (Pos. 6) must be positioned in the recess of the triggering bushing (Pos. 2a). Then secure lifter (Pos. 2) at the draw-in lifter (Pos. 8) and lifter shafts (Pos. 10) by means of the bolt (Pos. 2). Before tightening the bolts and lock nuts, check that the draw-in lifters (Pos. 10) are in neutral position (safety gear fully open) and the lifter (Pos. 2) and support plate (Pos. 4) are parallel, when viewed from above. Then tighten all bolts and lock nuts. Now check that the lifters (Pos. 2) can be moved freely up (PC200E) and down (PC200U) from the initial position. Before hooking in the release mechanism tension spring (Pos. 12) at the safety gear frame (tension spring by 5-10mm) check manually that the engaging lever system moves smoothly.

1.4. Type plate

Before attaching the enclosed type plate in a clearly visible position of the frame, the intended surface must be cleaned and be completely dry. The adhesive surface of the type plate must not be touched over a large surface. After adhering press firmly.

1.5. Indicating label for oiled rails

Every progressive safety gear or brake device for use with oiled rails is supplied with a yellow indicating label. This should be attached in a clearly visible position (e.g. on rail oiler). Only an ordinary machine oil of the viscosity class ISO VG 68-150 must be used without any extreme-pressure additives (lubrication oil C according to DIN 51517, part 1). Because lubricating oils for gearboxes, engines or hydraulic units frequently contain additives, they are not suitable for this application.

2. Connection

Wire limit switch (230 V, 4 A) (Pos. 6) and check function.

Connect safety gear rope with rope end connections of safety rope connector (Pos. 7) at lifter (Pos. 2).

The release force at the lifter (Pos. 9) required for the safety gear to engage is approximately 350-400N. It must be ensured that the tensile force in the limiter rope generated by the released speed limiter is at least 2 times the force required for the safety gear to engage (however, at least 300N).

3. Commissioning

Note: To be observed prior to the first safety gear test:

In all cases, dirt, rust-protection, and eventual paint coats have to be removed from the guide rail running surfaces. This is made best using cold cleaning agents or brake disk cleaning agents.

In the case of oiled rails the lubrication oils C recommended according to the yellow indicating label should be used (DIN 51517, part 1, viscosity ISO VG 68-150).

4. Maintenance

If the progressive safety gears or brake devices have been correctly installed, then the maintenance is limited to the following checks:

4.1. Condition of rails:

according to above commissioning instruction

4.2. Triggering linkage:

Synchronous response of engaging lifters (Pos. 10), connection of connection shaft, free and smooth movement of the lifter (Pos. 2) in the respective direction.

4.3. Limit switch:

Correct electrical/mechanical functioning, actuation ensured

4.4. Safety gear heads:

centred, clean

4.5. Guide-ways of cabin:

In an impeccable condition.

4.6. Cleanliness:

In general and in particular in the case of building construction elevators and conversions of existing installations: make sure that the safety gear heads are protected against contamination with plaster, concrete, cement, mortar, gravel or other materials. Contaminated safety gear heads have to be dismantled and cleaned.

If these simple instructions are followed, then the safety for the users of the elevator as well as for the installation company can be increased significantly.

